Production of aluminium strip with micron tolerances. (Cont.) installation used are illustrated. It was found that by increasing the number of passes on 2-high rolling mills and correct selection of lubricant the percentage of strip with thickness tolerance of ± 0.005 mm can be increased 42%; the proportion rises to 51% with a foil mill. The proportion does not rise if 3- or 4-high mills are used, but a mill with 12 rolls gives a proportion of 68.5%. Better results are obtained by the drawing method, the proportion then being 93%, 80% being 0.5 ± 0.003 mm thick. A simple design of drawing installation is used, with a productivity of 50 and 100 kg/hour for narrow and wide strip, respectively. It was found that with the technology adopted thickness measurements on specimens cut from the front and back ends of the strip were within ± 0.003 mm of the thickness at any part of the strip. Work described has enabled the large scale production of aluminium strip in long lengths and to micron tolerances to be organised, this product being necessary for the production of variable-capacity condensers. The technology is also applicable to other metals and other thicknesses. There

ASSOCIATION: The imeni Voroshilova Works (Zavod im. Voroshilova)

Card 2/2

CLERNYAH, SIL

ALEKSEYEV, N.S.; BELYAYEV, A.P.; BUGAREV, L.A.; BUTOMO, D.G.; VASIL'YEV, Z.V.;

VERIGIN, V.N.; VOROB'YEV, G.M.; GAYLIT, A.A.; GOL'SHTEYN, P.M.;

GOKHSHTEYN, M.B.; ZHOLOBOV, V.V.; ZEDIN, N.N.; IVANOV-SKOBLIKOV, N.I.;

KUTEPOV, Ya.V.; LANDIKHOV, A.D.; MARAYEV, S.Ye.; MILLER, L.Ye.;

OL'KHOV, N.P.; PERLIN, I.L.; POSTNIKOV, N.N.; ROZOV, M.N.; CHERNYAK, S.N.;

CHUPRAKOV, V.Ya.; TSENTER, Ya.A.

Vladimir Oskarovich Gagen-Torn; obituary. TSvet.met. 27 no.5:67-68 S-0 '54. (MIRA 10:10) (Gagen-Torn, Vladimir Oskarovich, 1888-1954)

. Chernyak, somen Natamovich

PHASE I BOOK EXPLOITATION

343

Chernyak, Semen Natanovich, Candidate of Technical Sciences, and Karasevich, Viktor Ivanovich, Engineer

Proizvodstvo fol'gi (Manufacturing of Foils) Moscow, Metallurgizdat, 1957. 271 p. 3,500 copies printed.

Reviewers: Postnikov, N. N., Engineer, and Sandler, G. G.; Eds.: Miller, L. Ye., and Nikonorova, N. A.; Ed. of Publishing House: El'kind, L. M.; Tech. Ed.: Karasev, A. I.

PURPOSE: The book is intended as a practical manual for engineering and technical personnel of nonferrous metallurgical plants. It can also serve as a means for increasing qualifications of foremen and brigade leaders in foundries and sheet-

rolling shops.

Card 1/12

٠:

Manufacturing of Foils COVERAGE: The book presents basic data on manufacture of types of foils made out of aluminum and other n metals and alloys. It describes all foil produ cesses from casting to surface finishing. Ther references, of which 26 are Soviet, and seven G British, and French.	onferrous ction pro-
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JAG/wde May 29, 1958	

SOV/137-58-11-22353

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 72 (USSR)

AUTHOR: Chernyak, S. N.

TITLE: Improvement of Casting and Rolling Process at the Leningrad

Nonferrous Metals Plant im. Voroshilov (Usovershenstvovaniye protsessov lit'ya i prokatki na Leningradskom zavode po obrabotke

tsvetnykh metallov im. K. Ye. Voroshilova)

PERIODICAL: V sb.: Metallurgiya. Moscow-Leningrad, AN SSSR, 1957,

pp 154-171

ABSTRACT: A description is offered of stages in the work at this plant, the

final product, improvement in equipment and flowsheets, suggestions for improving operations, the role of production-efficiency engineers in improving production, and problems facing the plant

in the future.

N. P.

Card 1/1

137-58-6-13560

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 340 (USSR)

AUTHOR: Chernyak, S.N.

TITLE: The Casting and Processing of Soviet Aluminum (Lit'ye i obra-

botka sovetskogo alyuminiya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 8, pp 101-108

ABSTRACT: A historical survey of casting and machining of domestic

aluminum at the Voroshilov plant in Leningrad.

N.G.

1. Aluminum--Processing 2. Aluminum--Casting

Card 1/1

Cheriyak, S.M.; Chernyak, S.N.; Prikhod'ko, V.Ye.; Karasevich, V.I.

Production of aluminum strip with micron tolerances. TSvet. met. 30 no.5:79-85 My '57. (MLRA 10:6)

1. Zavod im. Voroshilova.
(Aluminum)

(Rolling (Metalwork))

SOV/137-59-3-6777

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 265 (USSR)

AUTHOR: Chernyak, S. N.

TITLE: Improving the Manufacture of Aluminized Iron (Usovershenstvovaniye

proizvodstva alyuminirovanogo zheleza)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu; "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 176-181

ABSTRACT: High-quality aluminized iron (AI), an excellent Ni substitute in plates of vacuum tubes, may be obtained by combining a basic (2x200-mm strip of steel 08KP (containing $\leq 0.1\%$ C and supplied in coiled form, in a particularly soft condition in accordance with GOST 1050-57) with an Al (grade 99.5) coating strip, 0.2 mm thick and 120 mm wide, containing 1-1.5% Si and being also supplied in coiled form. The technological processes of the manufacture of the duplex metal include etching of the steel, polishing of the steel (both sides) and polishing of the Al (on one side) followed by rolling (R), combined with concurrent brazing of the Al to the steel, in a six-roll mill (160/350x150 mm) at a rate of 31 m/min, the degree of reduction

amounting to 55% or more in one pass. R of the strips to a final Card 1/2

SOV/137-59-3-6777

Improving the Manufacture of Aluminized Iron

thickness of 0.3, 0.2, 0.15, and 0.10 mm is performed without intermediate annealing. Final annealing (in a batch-type reheating furnace; the weight of the charge being 300 kg) at a temperature of 535-540°C requires 4-8 hours for the given thicknesses. The surface quality may be improved by gently cleaning one side of the Allayer with fine steel brushes after annealing in order to remove all traces of Al2O3. One-sided plating of steel is accomplished in the same manner as twosided plating, the only difference being that the steel is prepared on one side only. Experimental batches of Al- and Ni-coated steels were obtained in the form of strips of a thickness of 0.1-0.3 mm. One side of the 2-mm thick steel strip was plated with a 0.2-mm layer of Al containing 1-1.5% Si, the other with a 0.2-mm layer of Ni. The Al and Ni were subjected to a preliminary anneal. Both metals were brazed onto the steel strip by being passed through a six-roll stand without preheating in a single pass at a reduction amounting to 65% or more. Further cold rolling of the strip was conducted without intermediate annealing. The finished strip was annealed at a temperature of 6500 at a drawing rate of 1.1 m/min. The depth of the cup in the Erichsen cupping test amounted to 5-6 mm for a finished strip 0.1 mm thick.

V.D.

Card 2/2

GORN, Aleksandr Grigor yevich, inzh.; LISKOVETS, Simon Abramovich, inzh.; CHERNYAK, Solomon Natanovich, inzh.; SHAPIRO, Iosif Abramovich, inzh.; PONOMARENKO, S.A., red.; BOHROVA, Ye.N., tekhn.red.

[Experience in the demonstrative building of railroads] Opyt pokazatel'nogo stroitel'stva zheleznykh dorog. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 143 p.

(NIRA 13:5)

(Railroads -- Construction)

ACC NR: AT7004477

SOURCE CODE: UN/3245/66/000/002/0083/0086

AUTHOR: Chernyak, S. P.

ORG: Kiev Institute of Automation (Kiyevskiy institut avtonatiki)

TITLE: Photoelectric system for sorting steel sheets by length

SOURCE: Kharkov. Institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki. Pribory i sistemy avtomatiki, no. 2, 1966. Promyshlennaya telemekhanika

TOPIC TAGS: photoelectric cell, sheet metal, steel industry, rolling mill

ABSTRACT: A photoelectric system schematically described here will determine whether steel sheets passing on a conveyor belt at speeds of up to 3 m/sec are too long, too short, or acceptable. As in existing systems, the distance between the first and second photocell is taken as the minimum permissible sheet size, and the distance between the first and third photocells is taken as the maximum permissible size. A decision logic is discussed which permits classifying a sheet into one of three categories by operating the first photocell on reflected light and the other two on direct light, or by operating all three photocells on reflected light (the present methods allegedly require direct light for all three photocells). The logic diagram is presented and the possible decision paths corresponding to various sheet sizes are traced through this diagram. Orig. art.

SUB CODE: 13/ SURM DATE: none

Card 1/1

USSI/General Biology. Individual Development. Sexual Cells.

D-4

Abs Jour: Ref Zhur-Biel., No 20, 1958, 90344.

Author : Chernyak, S.S.

Title : The Effect of the Cold Storage of Spern on the Retio of

the Sexes in Robbit Offspring.

Orig Pub: Dopovidi AN URSR, 1956, No 4, 408-413 (Ulrainian; res.

Russ.)

Abstract: When sperm was stored at 0° for $15\frac{1}{2} - 16\frac{1}{2}$ hours and

diluted with glucose-tartrate, the number of females in the offspring increases from 27.8 to 58.18% (in an experimental group of 55 rabbits) and stored for 22-42 hours to 69.23% (in an experimental group of 52 rabbits). There was no change in the rabbits' impresquability and

Card : 1/2

USSR/General Biology. Individual Development. Semual Cells.

B-4

Lbs Jour: Ref Zhur-Biol., No 20, 1958, 90344.

fertility nor in the viability and the weight of the offspring when cold stored sperm was used. The author thinks this method may have practical significance in increasing the number of females in the propeny. --...V. Chuvayev.

ASSOCIATION: Ukrains'kiy n. -d. ejsoerunebtak'hiy institut ochnikh khvorob ta tkaninnoi terapii imeni Akademika V.P. Filatova. Predstavleno akademikom Akademii nauk USSR V.P. Filatovym.

Card : 2/2

15

CHERNYAK, S. S.: Master Biol Sci (diss) -- "The effect of preservation of sperm cells at low temperatures on the quality of the offspring of rabbits". Odessa, 1959. 18 pp (Min Higher Educ Ukr SSR, Odessa State U im 1. I. Mechnikov), 170 copies (KL, No 13, 1959, 103)

S/200/61/000/001/002/005 D223/D305

1.1800 also 4016, 1087

Chernyak, S. S., Tolstikova, Ye. A., and Kuznetsov, R.A.

TITLE:

AUTHORS:

Increase in resistance to wear of steels and cast irons

by the method of electrolytical sulphidation

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya,

no. 1, 1961, 25-30

TEXT: The sulphidation processing of metallic surfaces is widely used in order to increase the resistance to wear and "gripping" ability of machine parts and cutting tools. In a previous work S. S. Chernyak and R. A. Kuznetsov (Ref. 1: Issledovaniye metodov sul'fidirovaniya dlya uprochneniya rezhushchego instrumenta i detaley mashin (Investigation of Sulphidation Methods for Hardening Cutting Tools and Machine Parts), TsBNTI, TsNIITMASh, M, 1959) give the results of work on the chemical-thermal sulphidation of cutting tools and the experimental data on the structure of sulphide film on the metal. Chemical-thermal sulphidation although giving satisfactory results in most cases suffers from: 1) Long sulphidation

Card 1/6

S/200/61/000/001/002/005 D223/D305

Increase in resistance...

Card 2/6

of parts in salt solution; 2) Need to use costly salts in appreciable quantities and their careful preparation; (dehydration, special feeding conditions etc); 3) Specific conditions of treatment with salt solution. The study of electrolytic sulphidation was principally concerned with the effect of optimum current density and the duration of electrolysis. The effect of these factors on the resistance to wear was compared to the chemically nickel-treated parts. The sulphur content of sulphided parts, and the anti-scratch properties and microstructure were determined also. Sulphidation was done in an electrolytic bath with a capacity of 4 liters at a temperature of 90 - 98°C. The electrolyte was an aqueous solution of potassium thiocyanide with a concentration of 42.5 g/l or 85% and sodium hyposulphite of 7.5 g/l or 15% strength. The cathode was made of lead sheet and the anode consisted of the sulphided sample. The voltage used varied within the range of 10-12 volts. The investigation confirmed that the electrolytical sulphidation produces a dense and deep (up to 0.3 mm) sulphide layer on the metallic surface. The sulphur concentration is plotted against the distance from the metallic surface by the authors. The microstructure of

Increase in resistance...

Card 3/6

S/200/61/000/001/002/005 D223/D305

electrolytically sulphided samples was studied after etching by an aqueous solution of acetic acid. The depth of the sulphide layer for the constant current density varies with the time of electrolytical treatment of the samples, examples being given in tabulated form in the article. Microphotography has shown that the structure of electrically formed sulphide layers on the steel and cast iron are identical. The electrolytically sulphided samples were checked for scratching by the method described in Ref. 1 (Op. cit) and results are given in Table 3. Legend: (1) Sample material; (2) Sample No; (3) Sample hardness after heat treatment. Hv.; (4) Condition of sulphidation; (5) Current density I, amp/dm2; (6) Time of processing; (7) Testing time mins.; (8) Results; (9) Modified cast iron; (10) Steel 40; (11) Steel 40X; (12) Not sulphided; (13) Does not scratch; (14) After 10 sec. catastrophic wear; (15) Does not scratch; (16) Negligible markings. As can be seen from Table 3 the samples subjected to electrolytical sulphidation possess increased antiscratching properties. The frictional wear was tested using friction mixture Ml. For steel samples a pressure of 100 kg was used and for cast iron 38 kg. The testing was done in 23 minute periods

S/200/61/000/001/002/005 D223/D305

Increase in resistance...

0	Ø	(3)	Режим'сул	ьфидирован.	(j)	.(3)
Материал образца	% obpasua	Твердость образна после тер- мич. обра- ботки, Нв	(§) плотность тока, I, а/дм ³	длитель- ность процесса, мни.	Дантель- ность испытания, мин.	Результати
() Чугун моди- фициро-	. 117 104 106	461 477 417	0,5 0,5 0,5	30 60 90	1,5 1,5 1,5	задира нет
ម្ចាប់ មេជ្	114	241	ис. сульфі (2)			через 10 сек. уівчался ка- тастрофич. износ
<i>-</i> -,	101	241	0,5	180	1.5) задира нет
(f) Сталь 40	15. 5 . 18	407 395 425	0,5 1.0 1,5	· 60 60 .60	1,5 (1 1,5 1,5)задира нет
(I) Сталь 40X	35 36 · 39	385 400 419	- 0,5 1,0 1,5	120 60 60	1,15 (1,25 1,15 ()задира нет незначит. риски

Card 4/6

Table 3

Increase in resistance...

S/200/61/000/001/602/005 D223/D305

which corresponds to 5000 revolutions of the roller. The products of wear were submitted for chemical analysis and the results are given in Table 4. Legend: (1) Sulphidation conditions; (2) Roller revolutions; (3) Current density a/dm²; (4) Time hours; (5) to 5000; (6) from 5000 to 10000; (7) from 10000 to 15000; (8) Sulphur content %.

пачаноств тока <i>I, а/дм</i> ³ (3)	время. час. ;}`	20 5000 (C)	до 10000 держание серы.	до 15000 76
1,5	1,5	2,775	0,488	
1,0	1,5	0,701	0,061	0,053
0,5	1,5	0,213	0,91	0,061

Card 5,6

i n

Table 4

Increase in resistance...

S/200/61/000/001/002/005 D223/D305

The results obtained indicate the effect of current density on the properties of sulphided samples, i.e. the change from 0.5 to 1.5 amp/dm² affects greatly the wear resistance. The samples treated by chemico-thermal sulphidation, by chemical nickel plating and by gaseous cyanide treatment all show inferior properties compared with the electrolytical sulphidation. Before treatment, samples were degreesed by benzene or an alkaline solution, containing 45 g/l NaOll, 95 g/l Na2CO3 and 10 g/l of Na2SIO3 then rinsed with water and dried. After sulphidation, they were washed with hot water and then kept in hot oil at 100 - 110°C. After electrolytical sulphidation, the life of various tools tested increased 1.5 - 3 times. There are 4 tables, 5 figures and 3 Soviet-bloc references.

ASSOCIATION: Irkutskiy zavod tyazhelogo mashinostroyeniya (Irkutsk

Plant of Heavy Machine Construction)

SUBMITTED: June 27, 1960

Card 6/6

SHUL'GINA, N.S.; CHERNYAK, S.S.

Biological activity of tissue preparations from various tissues of animal erigin. Uch.zap. UEIGB 5:293-301 '62 (MIRA 16:11)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-R

CIA-RDP86-00513R000308610019-3

ACCESSION NR: AR4044004

5/0058/64/000/006/2049/2049

SOURCE: Ref. zh. Fizika, Abs. 6E368

AUTHOR: Distler, G. I.; Ry*chkova, S. V.; Chernyak, T. Ye.; Chudakov, V. S.

TITLE: Use of the method of infrared polariscopy to study models of alloy junctions and the influence of mechanical processing on birefringence in Si crystals

CITED SOURCE: Sb. Metod fotoelektr. infrakrasn. polyariskopii i defektoskopii poluprovodnik. materialov. M., 1962, 16-21

TOPIC TAGS: IR polariscopy, alloy junction, silicon crystal, crystal, birefringence

TRANSLATION: Studies high-resistance n-type silicon single crystals grown by the Czochralski method in a vacuum, and He with resistivity of 20-100 ohm-cm. Birefringence in crystals is studied by the method of photoelectric infrared polariscopy. It is found that during crystal growth there arise stressed regions near the lateral face; the stresses reach up to 63 kg/cm². For plates cut perpendicular to the axis of growth it is shown that stresses along the axis of the bar spread non-uniformly; maximum birefringence occurs at the ends of the bar. There were in-

Card 1/2

ACCESSION NR: AR4044004

vestigated plates cut at an angle to the growth axis. In this case, stresses in regions with maximum birefringence in these plates are considerably smaller in value and spread more uniformly.

SUB CODE: SS, OP

ENCL: 00

Card 2/2

CHERTOK, Boris Yefimovich; TULA, F.A., inzh., retsenzent; CHERNYAK, V.A., inzh., retsenzent; SKRYPNIK, I.P., inzh., red.; ONISHCHENKO, H.P., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

<u>.</u>

[Laboratory work on the technology of metals] Laboratornye raboty po tekhnologii metallov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 181 p. (MIRA 14:7) (Metallurgy-Laboratory manuals)

CHERNYAK, V.A.

Veterinary pathology as a heading under comparative pathology.

Arkh.pat. 21 no.11:82-89 '59. (MIRA 13:12)

(VETERINARY PATHOLOGY)

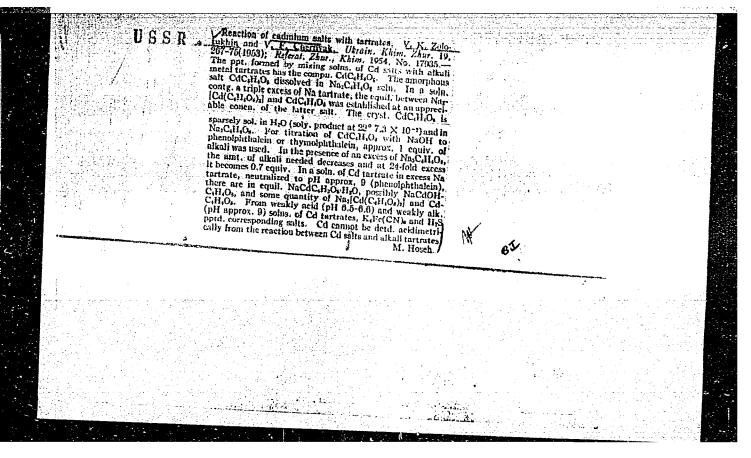
CHERNYAK, V.A., kand.filosofskikh nauk

Studies of the causes of the vitality of the surviving traces of religion. Vest.AN Kazakh.SSR 18 no.11:55-61 N '62.

(MIRA 15:12)

(Religion)

ACCESSION NR: AR5019139	UR/0137/65/000/007/D031/D031
SOURCE: Ref zh Metallurgiya, Abs	700
AUTHOR: Kolesnik B. P.; Chernyak	
TITLE: Bail test method for determining high strength tube steels	ning tensile strength and vield is not f
CITED SOURCE: Sb. Proiz-vo trub.	Vyp. 14 M., Metallurgiya, 1964, 128-132
TOPIC TAGS: pipe, high strength ste	\
TRANSLATION: The article examines	the hall test method to save a second or
sile strength and the yield point of hig	h strongth tube steeps. After our consideration
bility of petroleum grade tubes who	eforms intimuous onten, from complete after the complete.
Orig. art. has: 2 illus., 1 table, 9 ht	edhilo in trotto king twittig thegt thegts yet. Anethis hittles III Wildhamiya
SUB CODE: MM ENC	
Card 1/1m	
Card 1/1	



.ACC NR: AP7001327

SOURCE CODE: UR/0371/66/000/005/0015/0019

AUTHOR: Chernyak, V. G. — Cernaks, V.; Dunina, A. A. — Dunina, A.; Larionov, M. G. - Larionovs, M.; Plyavinya, I. K. - Plavina, I.; Shamovskiy, L. M. -Samovskis, L.; Tale, A. K. — Tale, A.

ORG: Physics Institute AN LatSSR (Institut fiziki AN Latv. SSR)

TITLE: Photoscintillations of KC1-T1 excited in the F-band

SOURCE: AN LatSSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk, no. 5, 1966, 15-19

TOPIC TAGS: scintillation, light excitation, excitation spectrum, of band

ABSTRACT: An investigation was made of the rapid transfer of energy from F-centers to activator centers and of the time necessary for such transfer when the crystals are subjected to pulsed excitation. The investigation was based on the comparison of the kinetics of activator luminescence excited directly in the center of luminescence (Tl-scintillation) and in the F-absorption band (F-scintillation). KCl-Tl-F crystals (0.2 or 0.5 mol% Tl in melt) were irradiated with x-or gamma rays. The concentration of F-centers did not exceed 5 x 10^{17} cm⁻³. The crystals were placed in a metallic cryostat and excited with light pulses (-10⁻⁷ sec) from a spark. The excitation was applied alternately in the 247 and 560 nm bands. A coincidence was found between F-scintillation and Tl-scintillation with regard to their time

Card

ACC NR: AP7001327

characteristics in the range from room temperature to the temperature of liquid nitrogen. The time characterizing the slow exponential decay τ_{LC} (LC-long component) in F-scintillations changed from 2.5×10^{-7} sec to 5×10^{-5} sec with a change in temperature from 300 to 80K. At low temperatures, a sharp emission (short component-SC) of luminescence occurs which describes the form of the exciting spark pulse, as in the case of T1-scintillation. The ratio of quantum yield of SC and LC of F-scintillation is the same as for T1-scintillation in the entire range of measured temperatures, which shows that the overpopulation of the ${}^{3}P_{1}$ level with respect to the 3Po level at F-scintillation is the same as in the case of Tl-scintillation. The SC and LC of luminescence in F-scintillations relate to the activator luminescence of KC1-T1, i.e., to the 305 nm band, but not to the 335 nm band, which corresponds to the hole centers. The maxima of the excitation spectra of F-scintillation and absorption spectra coincide and are in the region of 560 ± 5 nm. From the experimental results, it follows that the mechanism of F-scintillation formation is of the electron type. This means that during short-time crystal excitation in the F-absorption band, free electrons, which are generated in the conductivity zone, recombine with holes, which are localized due to x-or gamma-irradiation on the activator ion or close to it. This process is accompanied by the excitation of the activator. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: O6Dec65/ ORIG REF: 007/ ATD PRESS: 5109

Card 2/2

L 27602-66 EWI(1) SOURCE CODE: UR/0020/65/162/001/0043/0045 ACC NR: AP6018401 AUTHOR: Achasov, N. N.; Rumer, Yu. B.; Chernyak, V. L.; Shirkov, D. V. (Corresponding member AN SSSR) ORG: Institute of Mathematics, Siberian Section, AN SSSR (Institut matematiki Sibirskogo otdeleniya AN SSSR) TITIE: Formal dynamic model of unitary symmetry SOURCE: AN SSSR. Doklady, v. 162, no. 1, 1965, 43-45 TOPIC TAGS: mathematic model; quantum mechanics ABSTRACT: The purpose of the article is to construct a quantum-mechanical model, the degeneracy of whose levels will have a one-to-one correspondence with all representations of group SU(3), each representation occurring only once. The model should possess not less than five degrees of freedom in accordance with the number of quantum numbers effecting the classification of states in group SU(3) (p, q, Q, Y, T). The authors outline the method by which they obtained a spectrum with terms having a one-to-one correspondence with representations of group SU(3): that is to say, corresponding to each representation D(p,q) of group SU(3) there is a term ω_{pq} with degeneracy the multiplicity of which equals M(p, q) = (p + 1) (q + 1) (p + q + 2) 12. The authors conclude that the adduced construction should be regarded as a certain formal model of unitary symmetry. The authors thank V. V. Serebryakov for the useful discussions. Orig. art. has: 6 formulas. [JPRS] SUB CODE: 20, 12 / SUBM DATE: 15Jan65 / ORIG REF: 002

CHERNYAK, V. N.

Subject : USSR/Engineering AID P - 2562

Card 1/1 Pub. 110-a - 1/16

: Kuznetsov, N. V., Shcherbakov, A. Z., Kands. Tech. Sci., and Titova, Ye. Ya., Chernyak, V. N., Engs. Authors

Title Most efficient gas velocities and comparison of data of

heating surfaces operating under pressure

Periodical: Teploenergetika, 8, 3-10, Ag 1955

Abstract : The authors determine the most efficient velocity for gas

flow in economizers and superheaters on the basis of research on heat transfer, aerodynamic resistance and scale deposits in tubes. A comparison between different shapes of heating surfaces is made in order to demonstrate possibilities for the improvement of convected sections in the boiler design. Nine diagrams, 8 Russian references,

1935-1955.

Institution: All-Union Heat Engineering Institute

Submitted : No date

Chernyak, V. Ja. N.

Subject

Card 1/1

: USSR/Engineering

Pub. 110-a - 3/14

Authors

: Kuznetsov, N. V. and Shcherbakov, A. E., Kands. Tech. Sci., Titova, E. Ya. and Chernyak, V. Ya.

AID P - 2761

Engs.

Title

: Optimal velocities of air and smoke gases in air-heaters and a technical and economical comparison of heated surfaces

Periodical

Teploenerg, 9, 18-21, S 1955

Abstract

: Preheaters of different types, such as plate, tubular, cast-iron ribbed and corrugated iron, and their operation are discussed. The most efficient velocity of air and gas in ducts is mathematically analyzed with equations and tables. Five diagrams.

Three Russian references, 1946-1955.

Institution : All-Union Heat Engineering Institute

Submitted : No date

CHERNYAK, V.N., inzh.

Methods for profiling injection control valves. Elek. sta. 35 no.8:8-14 Ag 164. (MIRA 17:12)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

"Heating of mine shafts" by M.M. Shemakhanov. Reviewed by
E.I. Baratov, V.P. Cherniak. Ugol' Ukr. 6 no.1:44 Ja '62.

(MIRA 15:2)

(Mining engineering)

(Shemakhanov, M.M.)

BARATOV, E.I.; CHERNYAK, V.P.

Improving the temperature conditions in lavas of deep mines by heat draining. Zbir. prats Inst. tepl. AN URSR no.22: 29-33 '61. (MIRA 16:6)

(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.; CHIZHOV, B.D., kand.tekhn.nauk

Determining the rated parameters of outside air for purposes of predicting and regulating the heat conditions of mines located in areas with an extreme continental climate. Trudy Sem.po gor.teplotekh. no.4:72-74 '62. (MIRA 15:8)

1. Institut teploenergetiki Al. UkrSSR.
(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

Regulation of the heat conditions in mines located in permafrost areas. Trudy Sem.po gor.teplotekh. no.4:94-100 162.

(MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.

(Mine ventilation--Cold weather conditions)

(Frozen ground)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

Regulating the heat conditions in mines located in areas with an extreme continental climate. Trudy Sem.po gor.teplotekh. no.4:101-105 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Mine ventilation)

SHCHERBAN', A.N., akademik; BARATOV, E.I., kand. tekhn. nauk; CHERNYAK, V.P., kand. tekhn. nauk

System of mine air cooling with the use of cased holes. Met. i gornorud. prom. no.6:53-54 N-D '65.

(MIRA 18:12)

1. AN UkrSSR (for Shcherban').

L 30350-66

ACC NR: AP6014733 (A) SOURCE CODE: UR/0327/65/000/012/0010/0012

AUTHORS: Baratov, E. I. (Candidate of technical sciences)(Kiev); Chernyak, V. P. (Candidate of technical sciences)(Kiev)

ORG: none

TITLE: Calculation of the efficiency of air conditioning in the control cabins of hoist-transport and excavation machines

SOURCE: Vodosnabzheniye i sanitarnaya tekhnika, no. 12, 1965, 10-12

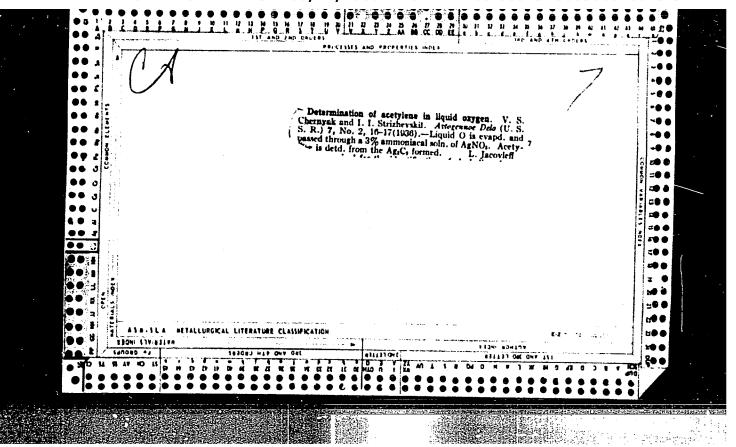
TOPIC TAGS: A Expire environment, air conditioning equipment, crane, heat transfer, heat balance, ventilation engineering, temperature / ERG-350/1000 EXCAVATINE MACHINERY

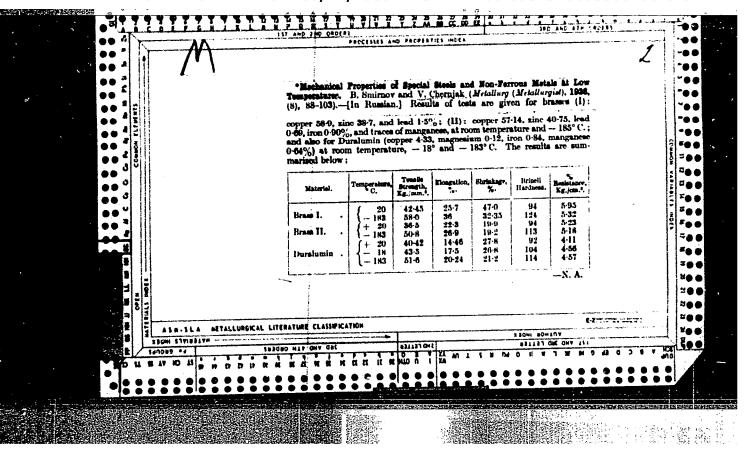
ABSTRACT: Equations are derived for determining the temperature of the air leaving the interwall space and the temperature of the air leaving the cabin when air conditioning is used. The sequence for making heat calculations for air cooling is given. A practical calculation is made for cooling of the cabin of the ERG-350/1000 rotary excavator. The results of the calculations show that air cooling with thermal humidity treatment of the cabin air by means of a sprinkling chamber, when the temperature of the external air is 30--40C, ensures a cabin air temperature of 21--27.2C with a relative humidity of 0.7--0.75. At temperatures above 40C, dry conditioners should be used in conjunction with air cooling of the enclosures.

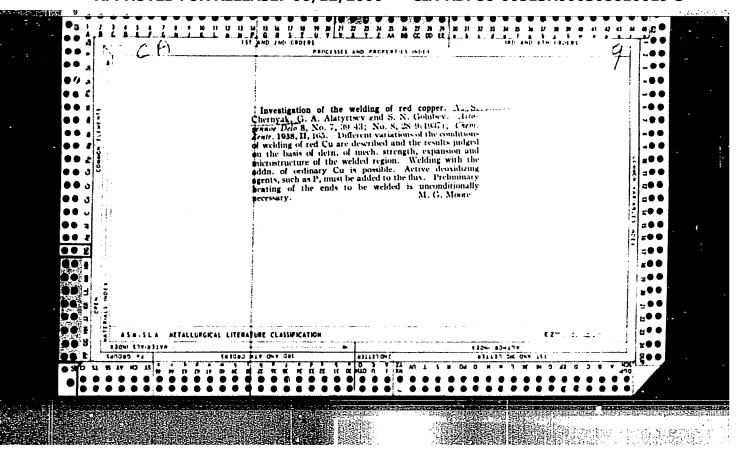
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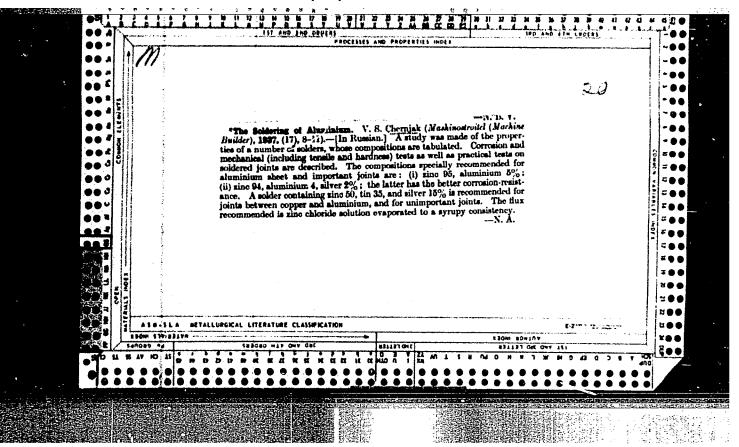
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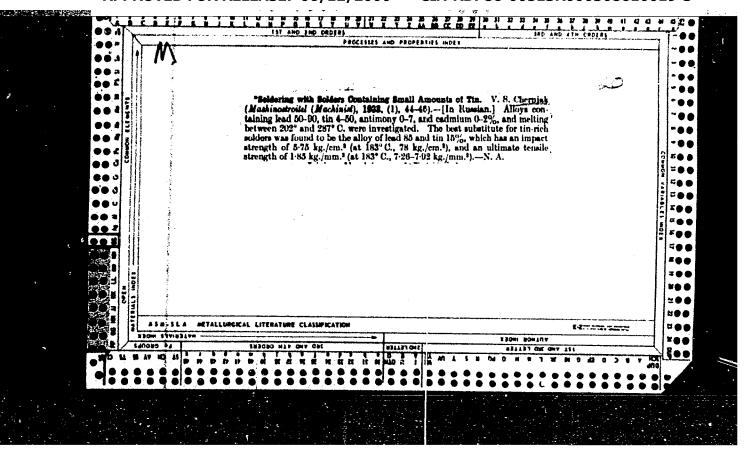
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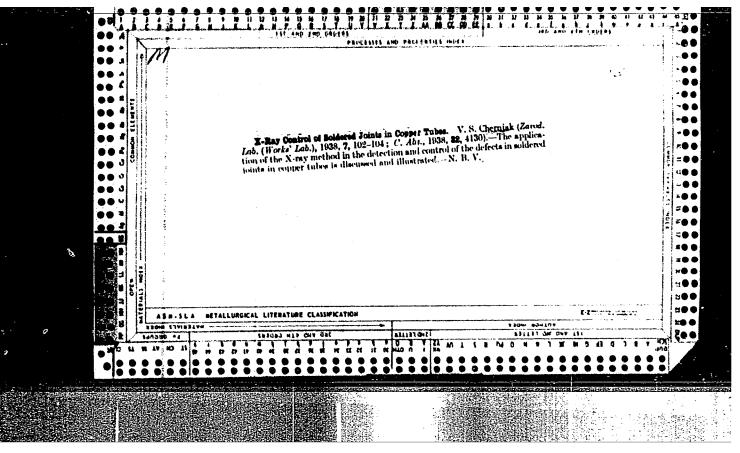


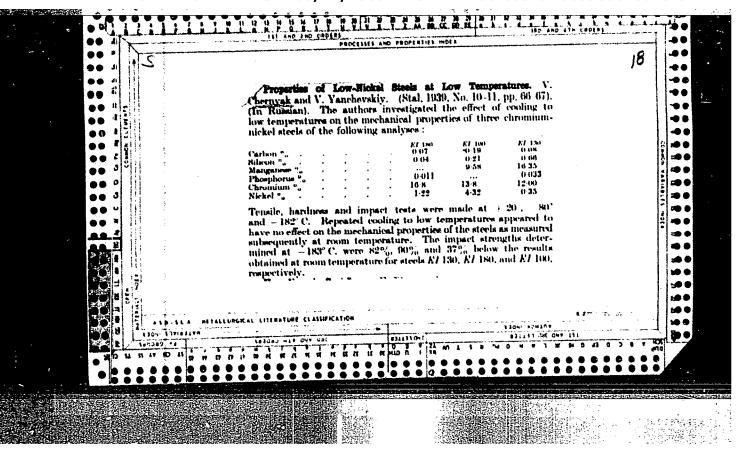


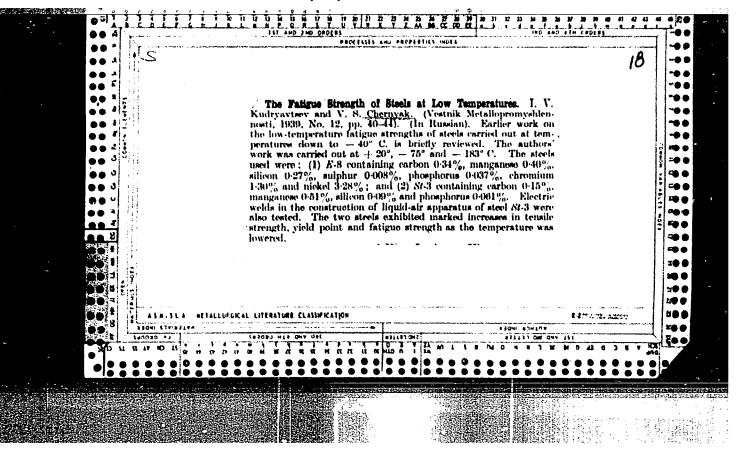


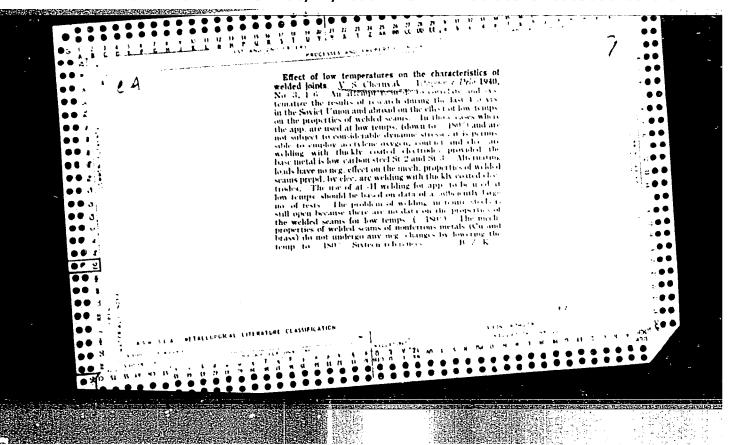


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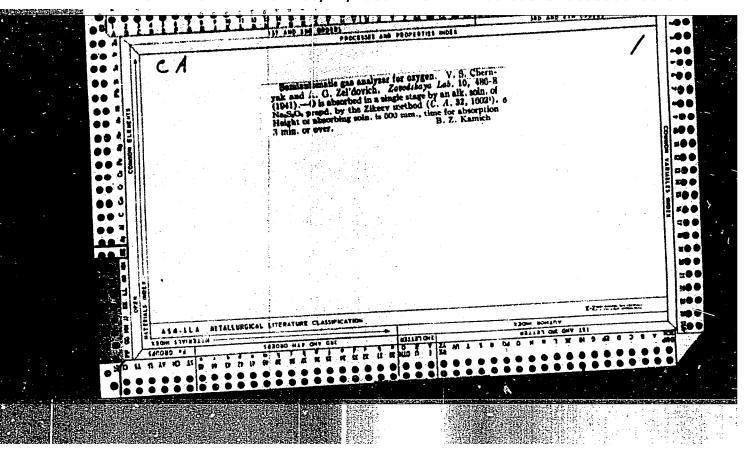


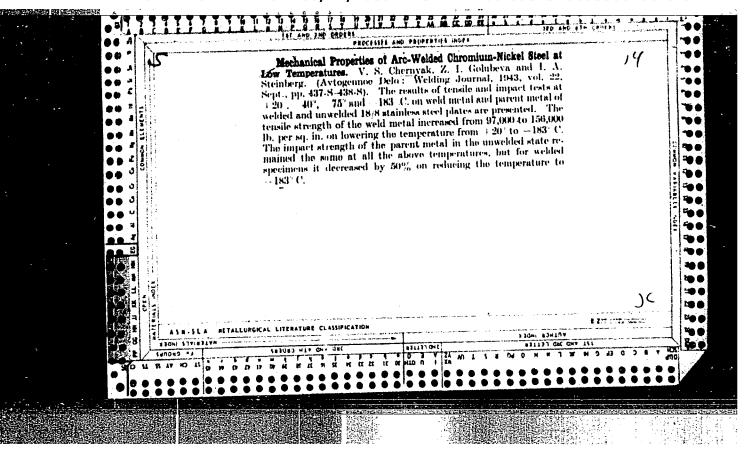


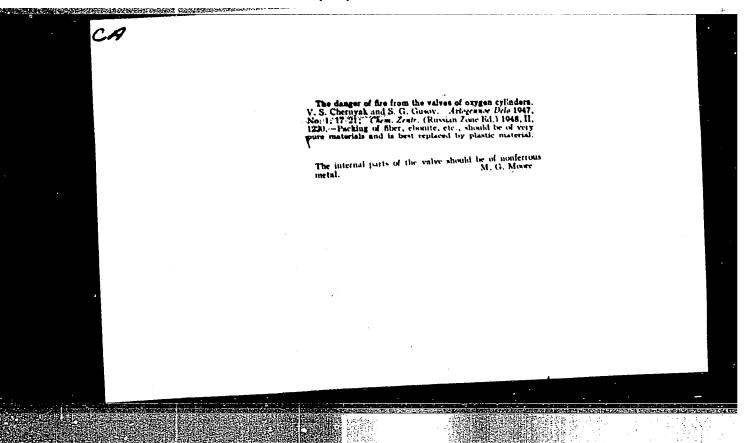




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CHERNIAK, V. S. AND OTHERS

Apparatura diia gazovoi svarki i rezki; rukovodstvo po remontu. Izd. 2 Sverdlovsk, Mashgiz, 1947. 163 p. diagrs.

Equipment for gas welding and cutting; manual on repair work.

DLC: TS227. C543 1947

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Contress, 1953

CHERNTAK, V. S. and FAL'KEVICH, A. S.

Rukovodstvo po gazovoi svarke i rezke. Dlia kursov tekhiminimuma mashinostroit. promyshl. 4. perer. izd. Moskva, Mashgiz, 1947. 191 p. illus.

Manual of gas velding and cutting.

DLC: TS227.F32 1947

SO: Manufacturing and Mechancial Engineering in the Soviet Union, Library of Congress, 1953.

CHERNYAK, V. S.

PA 19/49T37

USER/Ingineering Cutting Torones Cutting, Gas

Jun 48

"New Machines and Equipment for Gas-Flame Working of Metals," V. S. Chernyak, Engr, Yu. Ya. Shafit, Engr, 4 3/4 pp

"Avtogennoye Delo" No 6

Treats subject under following: (1) semiautomatics and automatics for oxygen cutting, (2) appliances for "minor mechanization" of gas-cutting processes, (3) equipment and apparatus for surface treatment, (4) equipment for gas-press welding and (5) high-pressure acetylene generators.

19/49137

CHERMYAK, V. S.

941038

Svarka i obrabotka metallov gazo-kislorodnym plamenem. Moscow, 1950. 283 p.

The theory and techniques of acetylene welding and cutting, description of fuel gases and apparatus needed in their production, technology of gas pressure welding and of tempering, description of equipment needed in welding and inspection methods, used to raise qualifications of foremen and workers in the field of acetylene welding; published as a Govt. Scientific-Technical Edition of Machine Construction Literature.

- 1. Russis Welding
- 2. Russia Metallurgical Industry
- 3. Russia Physics Research
- i. Welding and Processing of metals with gas-oxygen flame
- ii. Title
- iii. Chernyak, V. S.

CHERNYAK, V. S.

USSR/Engineering - Welding, Equipment Oct 51

"New GOST for Acetylene Generators," V. S. Chernyak, A. A. Morkovkin, Engineers

"Avtogen Delo" No 10, pp 30, 31

Illustrates, by several examples, violation of safety rules and basic principles which occurred in fabrication of acetylene generators before May 1950, when new GOST 5190-49, developed by VNIIavtogen, was accepted. Generators are classified according to productive capacity, type of installation, max pressure and method for bringing calcium carbide and water into contact.

202T46

DOLGITSER, L.Z.; MORKOVKIN, A.A.; CHEHNYAK, V.S.; GLIZMANENKO, D.L., kandidat tel hnicheskikh nauk, retsenzent; SERGEYEV, H.P., inzhener, redaktor.

[Apparatus and equipment for gas welding and cutting of metals: brief manual on operation and repair] Apparatura i oborudovanie dlia gazoplamennoi obrabotki metallov; kratkoe posobie po ekspluatatsii i remontu. Moskva, Gos. nauchno-tekhn. isd-vo mashinostroit.i sudostroit. lit-ry. 1953. 191 p. (MLRA 7:6)

CHERNYAK, V. S. and FAL'KEVICH, A. S.

Svarka i obrabotka metallov gazo-kislorodnym plamenem. Moskva, Mashgiz, 1950. 283 p. illus.

Welding and metal working by oxyacetylene flame.

DIC: TS227.F33

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SEMYACHKIN, S.Ye.; FILARETOV, G.V.; CHERNYAK, V.S., nauchnyy redaktor; KONTSEVAYA, E.M., redaktor; TORSHINA, Ye.A., tekhnicheskiy redaktor.

[Welded roofs] Svarnye krovli. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 41 p. (MIRA 9:6) (Roofing--Welding)

5(1) AUTHOR:

Chernyak, V. S., Engineer

SOV/67-58-6-5/22

TITLE:

New GOST for Gaseous Technical and Medicinal Oxygen (Novyy GOST na gazoobraznyy tekhnicheskiy i meditsinskiy kislorod)

PERIODICAL:

Kislorod, 1958, Nr 6, pp 22 - 24 (USSR)

ABSTRACT:

The Committee of Standards, Measures and Measuring Instruments of the Soviet Cabinet Council, introduced the GOST 5583-58 in July 1958 to replace the GOST 5583-50. It will be enforced on January 1, 1959. Quality is improved and the range of applicability is widened. The development of new standards had become imperative as the new methods of metal processing (metalization, hardening, melting, cutting with gas torches) called for a higher degree of purity in oxygen. Investigations of the cutting process carried out by A. K. Ninburg (VNIIAvtogen) are mentioned. An insufficient degree of

purity leads to a decrease of the cutting speed and the cutting surface is enlarged. Three types of oxygen are now produced with the purity degrees 99.2, 99.5, 99.8%. The humidity content had not been standardized in the past. Its

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admissable limit was fixed to be 0.07 g/m^3 . The new standards

New GOST for Gaseous Technical and Medicinal Oxygen

SOV/67-58-6-5/22

call for purest oxygen, medicinal oxygen in the first place to be obtained from water by electrolysis. There are 3
figures and 5 references, 4 of which are Soviet.

Card 2/2

SOV/137-58-7-15173

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 179 (USSR)

AUTHORS: Brinberg, I.L., Kochanovskiy, N.Ya., Chernyak, V.S.

TITLE: Modern Welding Equipment and Problems of Its Design (Sovremennoye sostoyaniye i zadachi v oblasti konstruirovaniya svarochnogo oborudovaniya)

PERIODICAL: V sb.: Sovrem. napravleniya v obl. konstruirovaniya tekhnol. oborud. Moscow, Mashgiz, 1957, pp 242-265

ABSTRACT: The design of modern welding equipment (E) must be directed along the lines of further development of such widely employed welding (W) methods as arc. resistance, and electric slag W, as well as gas-flame treatment of metal. An immediate task in mechanization of manual arc welding (in the case of welding tilters and manipulators with mechanical, pneumatic, hydraulic, and magnetic devices capable of handling stock weighing 0.1-50 t. The design of W E employing electrodes must include provisions for the creation of automatic production lines for continuous manufacture of electrodes. E for automatic submerged and gas-shielded W is described briefly,

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Modern Welding Equipment and Problems of Its Design

together with the most advanced types of design of such E. Recommendations are given for the construction of improved W heads, supporting rollers, trucks, pumps for drawing off of flux, feeding mechanisms, etc. Electric slag W E is examined together with the E supplying the electrical power. Means of further improvement of design of electric slag W E are outlined; they include resistance-slag W, W with laminated and combined electrodes, W of structures with curved seams, building up of metal surfaces by means of W, etc. A survey of modern resistance W E is given. Latest machines for resistance W E is given. Latest machines for resistance W are described briefly; this includes the MTIK-01 machine for spot welding of metal 0.01 to 0.1 mm thick; the ATMS-14 x 75 machine for manufacturing of columns, grids, and frameworks employed in reinforced-concrete structures, and the MShShI-40 machine for seam welding of components made of Al alloys with a thickness varying from 0.8 mm to 2 mm, etc. Goals in the design of resistance W E are presented in detail; they include the following: Creation of three-phase-single-phase power circuitry; employment of direct (rectified) low-frequency current; extensive employment of electronics, semiconductors, and pneumatic-hydraulic devices in the circuits of the W machines; creation of E capable of controlling the quality of welded connections. An abbreviated description of modern E for gas-flame treatment

SOV/137-58-7-15173

Modern Welding Equipment and Problems of Its Design

of metals includes the following topics: Oxygen cutting, gas welding, surface hardening, metallization, gas-flame spraying on of plastics. Requirements that must be satisfied by the newly produced E are formulated. 15 drawings and photographs are included. Bibliography: 29 references.

B.K.

1. Welding--Equipment

Card 3/3

CHERNYAK, V.S.

SUBJECT:

USSR/Welding

135-7-16/16

AUTHOR:

Chernyak, V.S., Engineer

TITLE:

The book "Gas-Welder's Manual", by V.V. Rybakov (Mashgiz, 1956). (O knige V.V. Rybakova "Uchebnik gazosvarshchika").

PERIODICAL:

"Svarochnoye Proizvodstvo", 1957, # 7, p 32 (USSR)

ABSTRACT:

The article represents a critical review of a book which the surveyor considers a necessary one in view of the acute lack of literature on the subject and the fast growth of the production of gas-welding equipment, which in 1955 attained 793% of the output of 1940, but criticizes some omissions and some wrong statements contained in the book.

For instance, the term "chemical welding" was applied to gaswelding and welding by forging; the statement that "good lowcarbon steel has an impact resistance of 0-15 kg/cm2", as steel with a resistance limit equal to zero is not good. Data are given on gasoline as a replacement for acetylene, while kerosene is not mentioned at all. Actually, kerosene is much more widely used since 90,000 kerosene cutters are produced annually which may be adapted for using gasoline, while gasoline cutters as

Card 1/2

TITLE:

135-7-16/16

The book "Gas-Welder's Manual", by V.V. Rybakov (Mashgiz, 1956). (O knige V.V. Rybakova "Uchebnik gazosvarshchika")

such are not produced. The data on granulation of calcium carbide is absolete, as well as some of the generators and cutters described; the widely used "ACW"-machines and the slag welding method are not mentioned. The described gas-welding technology for pipes is never applied in practice and only exists in technical literature, besides, gas-welding of pipes is slow and uneconomical as compared with electric welding.

ASSOCIATION: Not stated.

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

VASIL'YEV, Kirill Vasil'yevich; SHAPIRO, Il'ya Samoylovich; CHERNYAK, V.S., nauchnyy red.; SITNIKOV, L.P., red.; GOROKHOV, Yu.N., tekhn.red.

[Electric-arc cutting of metals] Dugovaia elektricheskaia rezka metallov. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervisdat, 1958. 64 p. (MIRA 12:1)

SEMIACHKIN, Sergey Yefremovich; FILARETOV, Gleb Vasil'yevich; CHERNYAK,
V.S., mauchnyy red.; RYCHEK, T.I., red.; TOKER, A.M., tekhn.red.

[Electric resistance welding] Kontaktnaia elektrosvarka. Moskva,
Vses.uchebno-pedagog. izd-vo "Trudrezervizdat," 1958. 125 p.

(Electric welding) (MIRA 11:12)

PHASE I BOOK EXPLOITATION

968

- Chernyak, Viktor Samuilovich, Engineer, and Voshchanov, Konstantin Pavlovich,
- Sprayochuik molodogo sværshchika (Handbook for the Young Welder) Moscow, Trudrezervizdat, 1958. 479 p. 65,000 copies printed.
- Scientific Ed.: Shukhgal'ter, L. Ya., Candidate of Tech. Sciences; Ed.: Rychek, T.I.; Tech. Ed.: Rakov, S.I.
- PURPOSE: The book is intended primarily for yourg welders who have completed vocational and railroad schools. It may also be of use to workers, foremen and technicians engaged in welding.
- COVERAGE. The authors describe modern velding equipment and materials, the latest technology of welding, and the optimum conditions for welding ferrous and nonferrous metals. They also deal with new high-production methods of welding, inspection of weldments, hard-facing, oxygen cutting and safety measures which must be taken to insure safe welding practice. We personalties are mentioned. There are 36 Soviet references.

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